

Application Serial No. 10/536,601
Reply to office action of March 12, 2008

PATENT
Docket: CU-4232

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-10 are pending before this amendment. By the present amendment, claims 1-2 and 6-10 are amended; and new claims 11-16 are added. No new matter has been added.

The specification stands objected to for an informality. The applicants have subsequently amended the specification in accordance to the examiner's suggestions. Accordingly, the applicants believe that the basis for this objection to the specification has been removed. Therefore, the examiner is respectfully requested to withdraw this objection to the specification.

Claims 1, 2 and 8-10 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,963,166 (Kamel) in view of Posner ("Lessons Learned from the Design and Development of the Satellite Control Center (SCC) for the Far Ultraviolet Spectroscopic Explorer (FUSE) Mission," Spaceops 98, Paper ID: 1b005, June 7, 1998.). The "et al." suffix is omitted in a reference name.

The applicants respectfully disagree.

The applicants submit that Kamel and Posner, in whole or in combination, do not teach or suggest --*a satellite task schedule planner for referring to the predicted various events and to inputted satellite tasks to schedule a satellite task schedule*-- now required in independent claim 1. The applicants further submit that Kamel and Posner,

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in whole or in combination do not teach or suggest —*a task analysis and planning system (TAPS) for analyzing orbit and attitude data of the satellite, for predicting various satellite events, and for inputting satellite task schedules to establish a finalized telecommand plan by applying a plurality of mapping rules according to the established task schedule to generate a set of telecommand data*—now required in independent claim 8.

In contrast to the presently claimed invention, Kamel teaches an image navigation and registration system that includes a ground segment and a spacecraft segment. The ground segment includes (1) an orbit and attitude tracking systems (OATS) 56; (2) a GOES telemetry and command system (GTACS) 55; (3) a product monitor (PM) 59; and may also include (4) an auxiliary ranging system (ARS). (See e.g., Kamel col. 7 lines 60 to col. 8 line 5). The on-board computer autonomously performs various housekeeping functions (col. 9 lines 14-21) as well as performs spacecraft control and motion compensation functions (col. 10, lines 13-24) to generate precise camera image motion compensation signals using precise orbit elements, e.g., attitude and camera synchronization data (col. 12, lines 16-18). The ground computer 41,42 does generate a schedule of daily camera operations (col. 12, lines 30-32). Nowhere in Kamel does Kamel disclose or suggests a satellite task schedule planner that refers to both predicted various events and to inputted satellite tasks to schedule a satellite task schedule.

Posner discloses a Spacecraft Command Language (SCL) whose expert system programmed artificial intelligence provides a basis for autonomous space and ground

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components to control a satellite. An on-board database and a complimentary version on the ground is used to provide the current state of each on-board sensor or system, to provide logical scripts and rules for the control the satellite. Posner is also silent with regards to disclosing or suggesting a satellite task schedule planner that refers to both predicted various events and to inputted satellite tasks to schedule a satellite task schedule.

As per MPEP §2143.03, the combined cited references must teach, suggest or disclose all of the claimed limitations to render a claim obvious.

Since Kamel and Posner, in whole or in combination, do not teach or suggest the above-emphasized limitations now required in independent claims 1 and 8, then Kamel and Posner cannot support an obviousness rejection to independent claims 1 and 8. Therefore, the applicants submit that independent claims 1 and 8 are in condition for allowance. Accordingly, the examiner is respectfully requested to withdraw this rejection to independent claims 1 and 8.

Claims 2 and 9-10 depend upon either independent claim 1 or 8, and as such, incorporate by reference all of the respective claim limitations contained therein, including the above-emphasized limitations which have already been shown to be absent from Kamel and Posner. Accordingly, claims 2 and 9-10 are also believed to be in allowable form as being dependent upon allowable base claims. The examiner is respectfully requested to withdraw this rejection to dependent claims 2 and 9-10.

Claims 3-5 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kamel in view of Posner, and further in view of Haag ("Use of WWW Technology for

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Mission Control Systems", ESA Bulletin No. 97, March 1999.). The "et al." suffix is omitted in a reference name.

The applicants respectfully disagree.

The above comments are equally applicable here in that Kamel and Posner, in whole or in combination, do not teach the above-emphasized limitation now required in independent claim 1.

In contrast to the presently claimed invention, Haag discloses a Mission Control System (MCS) responsible for monitoring the health of a spacecraft and for controlling it. It comprises a computer system connected to one or more ground stations, which are responsible for communication with the spacecraft. As such, Haag discloses a user interface for giving instructions to the satellite control system. However, Haag is also silent with regards to disclosing or suggesting —*a satellite task schedule planner for referring to the predicted various events and to inputted satellite tasks to schedule a satellite task schedule*— now required in independent claim 1.

Since Kamel, Posner and Haag, do not teach or suggest the above-emphasized limitation now required in independent claims 1, then Kamel, Posner and Haag cannot support an obviousness rejection to independent claim 1.

As to claims 3-5, the applicants respectfully submit that these claims are allowable at least since they depend from claim 1, which is now considered to be in condition for allowance for the reasons above.

Claims 6-7 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kamel

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in view of U.S. Patent No. 6,275,677 (Tandler) and Posner. The "et al." suffix is omitted in a reference name.

The applicants respectfully disagree.

The above comments are equally applicable here in that Kamel and Posner, in whole or in combination, do not teach the above-emphasized limitations now required in independent claim 1.

In contrast to the presently claimed invention, Tandler discloses a method of reconfiguring satellite communication systems by using region defining dot products of Tandler (col. 2 line 42-54) to define and to identify adjacent geopolitical region in order to efficiently communicate with ground stations within the particular adjacent geopolitical region. When the satellite 10 is deemed to be within a region 14, the computer 20 will execute a predetermined set of commands stored in the command set storage unit 32 to reconfigure the satellite in accordance to communication protocols applicable to that particular region 14. The applicant can find nothing within Tandler that teaches or suggests the above-emphasized limitation of —*a satellite task schedule planner for referring to the predicted various events and to inputted satellite tasks to schedule a satellite task schedule*— now required in independent claim 1.

Since Kamel, Posner and Tandler, do not teach or suggest the above-emphasized limitation now required in independent claims 1, then Kamel, Posner and Tandler cannot support an obviousness rejection to independent claim 1.

As to claims 6-7, the applicants respectfully submit that these claims are

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allowable at least since they depend from claim 1, which is now considered to be in condition for allowance for the reasons above.

As to new claims 11-16, the applicants respectfully submit that these claims are allowable at least since they depend from either claim 1 or 8, which is now considered to be in condition for allowance for the reasons above.

For the reasons set forth above, the applicants respectfully submit that claims 1-10 and new claims 11-16, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter.

This amendment is considered to be responsive to all points raised in the office action. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,



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